Securing Access to Climate Change Technologies

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Securing Access to Climate Change Technologies: Answers and Questions

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Abstract
Analysis of the impact of intellectual property on access to climate change technologies; the relevance of international regimes relating to climate change and human rights; and the place of other principles in enabling wider access to essential technologies. Part of wider project, 'Obtaining, protecting and using essential environmental technologies: a holistic analysis', funded by the British Academy

Keywords
Intellectual property, patents, copyright, WIPO, TRIPS, ACTA, UNFCC, United Nations, Kyoto Protocol, climate change technology.

'Securing access to climate change technologies: answers and questions'*

1. Introduction

The challenge of responding to climate change has included a focus on new technologies. As a result, the ability to control technologies can be very important. This preliminary working paper will explore the relationship between control of and access to these technologies, and the relevance of international obligations relating to intellectual property ('IP'), climate change and human rights. It will consider the extent to which these areas can be combined to enable climate change to be addressed most effectively, discuss what other disciplines should also be considered and introduce key principles and material.

This paper forms the start of a project—'Obtaining, protecting and using essential environmental technologies: a holistic analysis'—led by the author, which has been supported kindly by the British Academy. This paper represents the personal views of the author. The project will give rise to another more detailed working paper arising from a meeting of experts shortly to be held in Edinburgh in June 2010 and in due course to an edited collection. It is also hoped to hold public engagement events in Edinburgh.

2. Setting the Scene

2.1 Climate Change and Technology

Technology has long formed part of international discussions in relation to climate change. The United Nations Framework Convention on Climate Change ('UNFCC') concluded in 1992 encourages its 194 member states to stabilise greenhouse gas concentration to prevent dangerous anthropogenic interface with the climate system.[1] It refers to the transfer of

* This working paper draws from a presentation given at 'Climate Change in the Courts: Emerging Patterns' Edinburgh November 2009 (slides at <www.law.ed.ac.uk/file_download/publications/1_543_securingaccesstoclimatechangetechnologie.pdf>) organised by my colleague Navraj Singh Ghaleigh. Many thanks to all who attended for their comments. Thank you also to students on the 2009 Chevenning Visiting Programme 'Finance and Investment in a Low Carbon Economy' at the University of Edinburgh.

[1] See UNFCC text at <unfccc.int/resource/docs/convkp/conveng.pdf>, articles 2, 3, 7, 8, 9 and 11. The UNFCC refers to gases which are not covered by the Montréal Protocol on Substances that Deplete the Ozone Layer

technology[2] and established the Subsidiary Body for Scientific and Technological Advice.[3] In 1997 the UNFCC Kyoto Protocol was finalised, and its 184 members committed to reduce greenhouse gas emissions.[4] To assist in this, in 2001 the Expert Group on Technology Transfer[5] ('EGTT') was established,[6] and in 2007, the UNFCC meeting of parties produced the Bali Action Plan. This called for enhanced action in technological development and transfer and established the Ad Hoc Working Group for Long-term Cooperative Action. This was[7] to report to the UNFCC meeting of the parties in Copenhagen 2009, where proposals for work beyond the Kyoto Protocol were to be developed.

The Copenhagen meeting failed to achieve a binding future plan to go beyond 2012, although it did produce the Copenhagen Accord, of which 'note is taken' by the UNFCC.[8] The Accord makes clear the ongoing place of technology in responding to climate change and proposes a new fund to assist in technology transfer.[9] Yet technology which is important for responding to climate change may be subject to intellectual property rights ('IP').

The Accord does not refer to IP, and this is an important omission. IP owners are highly likely to be private entities, not states with responsibilities under the UNFCC. Yet an IP owner can control the use of the technology and decline to allow others to use technology, no matter how important the wide use of technology might seem from the perspective of the UNFCC. There are strong arguments that IP makes a positive contribution to encouraging

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1990 (<www.unep.org/OZONE/pdfs/Montreal-Protocol2000.pdf>) For details of states involved, see UNFCC Annex 1 <unfccc.int/parties_and_observers/parties/annex_i/items/2774.php>, Non Annex I <http://unfccc.int/parties_and_observers/parties/non_annex_i/items/2833.php>.

[2] See UNFCC articles 4(1)(a)-(d), article 4(2)(a) and (b) and article 6).

[3] See UNFCC articles 5 and 9.

[4] <unfccc.int/kyoto_protocol/items/2830.php>. For details of ratification, see <unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php>.

[5] See Decision FCCC/CP/2001/13/Add.1 <unfccc.int/resource/docs/cop7/13a01.pdf#page=22>, article 2

[6] For more details of its activities see eg UNFCC (2007) 'Expert Group on Technology Transfer. Five Years of Work' <unfccc.int/resource/docs/publications/egtt_eng.pdf>.

[7] See Decision FCCC/CP/2007/6/Add.1* <unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3>, see articles 1(d). At the conference of the parties in Poznań in 2008, a strategic programme was set up in relation to the development and transfer of technologies. FCCC/CP/2008/7/Add.1 <unfccc.int/resource/docs/2008/cop14/eng/07a01.pdf>.

[8] <unfccc.int/meetings/cop_15/items/5257.php>.

[9] Copenhagen Accord FCCC/CP/2009/11/Add.1 <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4>, paras 10 and 11. For discussion of technology transfer mechanisms and new forms of funding, see Gerstetter, C. et al 'Technology Transfer in the International Climate Change Negotiations—The State of Play and Suggestions for the Way Forward' (2010) 1 CCLR 3.

innovation as a whole.[10] These points have also been made in relation to climate change,[11] most recently in a statement by a representative of the World Intellectual Property Organization ('WIPO') at the EGTT in 2009, which stressed the positive contribution to be made by WIPO and IP in relation to the 'transfer of environmentally sound technologies to developing countries'.[12]

The relationship between IP and climate change is being increasing recognised. It was the subject of significant discussion before Copenhagen,[13] and was featured in a special report in the Financial Times of 4 June 2010—'The Environment and Intellectual Property'. Notwithstanding the positive arguments which can be made about IP, the potential conflict between IP and climate change has already been the subject of detailed consideration by academics and international organisations.[14] This mirrors a deep body of work in other fields of activity regarding the clashes between public benefit and private gain which can arise from IP.[15] From this literature and discussion, it has been argued that there should be more sharing

[10] This is a wide and deep debate. See eg Mackay, E. (1990) 'Economic Incentives in Markets for Information and Innovation', *Harvard Journal of Law and Public Policy*, 13(3), Summer, 867–909 and Merges, R.P. (1994), 'Of Property Rules, Coase, and Intellectual Property', *Columbia Law Review*, 94, 2655-73 both in Towse, R. and Holzhammer, (eds) (2002) *The Economics of Intellectual Property: Vol I Introduction and Copyright* The International Library of Critical Writing in Economics 145, Edward Elgar Publishing Ltd, Cheltenham, UK at 8 and 95 respectively and Scherer, F.M. 'The Innovation Lottery' 3 in Dreyfuss, R.C. et al (eds) (2001) *Expanding the Boundaries of Intellectual Property. Innovation Policy for the Knowledge Society* Oxford University Press, Oxford, UK and New York, USA.

[11] See discussion in Derzko, N.M. 'Using Intellectual Property Law and Regulatory Processes to Foster the Innovation and Diffusion of Environmental Technologies' 1996 20 *Harv. Envtl. L. Rev*. 3 and Mandel, G. M. 'Promoting Environmental Innovation with Intellectual Property Innovation: An New Basis for Patent Rewards' 24 *Emp. J. Sci. Tech. & Envtl. L.* 51. For a full literature review, see Johnson, D.K.N. and Lybecker, K.M. 'Innovating for an uncertain market: A literature review of the constraints on environmental innovation' Colorado College Working Paper 2009-06 July, 09 <www.ciaonet.org/wps/doeabcc/0017425/index.html>.

[12] See FCCC/SB/2009/INF.6 <unfccc.int/resource/docs/2009/sb/eng/inf06.pdf>, para 42.

[13] Copenhagen Economics (2009) 'Are IPR a Barrier to the Transfer of Climate Change Technology' <trade.ec.europa.eu/doclib/docs/2009/february/tradoc_142371.pdf>. Cf Lee, B. et al (2009) 'Who Owns Our Low Carbon Future? Intellectual Property and Energy Technologies' Chatham House <www.chathamhouse.org.uk/files/14699_r0909_lowcarbonfuture.pdf>.

[14] Landmark pieces are Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>, and Abbott, F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

[15] See eg Drahos, P and Mayne, R. (eds) (2002) *Global Intellectual Property Rights. Knowledge, Access and Development* Palgrave Macmillan, Basingstoke, UK and New York, USA and Maskus, K.E. and Reichman, J.H. 'The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods' 3 in Maskus, K.E. and Reichman, J.H. (eds) (2005) *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime* Cambridge University Press, Cambridge, UK.

and licensing of IP.[16] Arguments have also been made for other forms of encouraging innovation, such as prizes and more collaborative forms of funding.[17]

These opportunities are indeed being explored in relation to the transfer of technologies in relation to climate change, with calls for open licensing of IP,[18] prizes in the UK in relation to carbon capture storage[19] and in Scotland with the Saltire Prize in relation to marine energy,[20] and the Copenhagen Accord's Green Climate Fund and Technology Mechanism discussed above.[21] This may lead to less IP being obtained, or to more willingness to license it. The body of work in relation to the impact of climate change does not, however, address directly, or seek to remove, the power of the IP owner to refuse to share technology and the impact of this on the international obligations of states. It is this, and its possible impact, which is the focus of this paper, and the wider project of which it forms part.''

2.2 IP and the control of technology

The first sections of this paper will proceed from the premise that problems will arise if technologies cannot be used widely in response to the challenges of climate change. It also assumes that problems arise from is the inability to use the technology itself because of the

[16] Eg through initiatives such as Creative Commons <www.creativecommons.org>. For developments in this respect in relation to climate change, see Van Hoorebeek, M. And Onizu, W. 'The Eco-Patent Commons and Environmental Technology Transfer: Implications for Efforts to Tackle Climate Change' 2010 1 CCLR 13.
[17] See Newell, R.G. and Wilson, N.E. (2005) 'Technology Prizes for Climate Change Mitigation' <www.rff.org/rff/Documents/RFF-DP-05-33.pdf>; UNFCC (2007) Innovative Options for Financing the Development and Transfer of Technologies' <unfccc.int/resource/docs/publications/innovation_eng.pdf>; ICTSD report on discussions in Bangkok 2008 <ictsd.org/i/news/bioresreview/12099/>; Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>, p31-3; Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>; Johnson, D.K.N. and Lybecker, K.M. 'Financing Environmental Improvements: A Literature Review of the Constraints on Financing Environmental Innovation' Colorado College Working Paper 2009-08 August 09 <www.ciaonet.org/wps/doeabcc/0017423/index.html> and Derclaye, E. 'Not Only Innovation but also Collaboration, Funding, Goodwill and Commitment: Which Role for Patent Laws in Post-Copenhagen Climate Change Action' 9 *J. Marshall Rev. Intell. Prop. L.* 657 (2010).
[18] Eg Wiener, J.R. 'Sharing Potential and the Potential for Sharing: Open Source Licensing as a Legal and Economic Modality for the Dissemination of Renewable Energy' 18 *Geo. Int'l Envtl. L. Rev.* 277.
[19] For Government comment and links, see <www.decc.gov.uk/en/content/cms/news/pn130/pn130.aspx>. For discussions in March 2010 regarding the prospects of Scottish Power, see <news.scotsman.com/scotland/ScottishPower-to-get-share-of.6126349.jp>.
[20] <www.scotland.gov.uk/Topics/Business-Industry/Energy/Action/leading/saltire-prize>.

stance taken by the IP owner, instead of or as well as a lack of capacity to do this because of manufacturing resources or human expertise.[22]

IP rights—which covers patents, copyright, trade mark, database rights, plant variety rights and design rights—confer on the owner the ability to control the use which others may make of the subject matter of the right. In relation to patents, which are the focus of much of this paper, this is so even if others had developed 'their' technology without making any reference to the patent.[23] There are substantial criteria to be met before the patent can be granted.[24] There is also a growing discussion as to the extent to which patents should or could be refused in relation to important environmental technologies, on the basis of existing principles in relation to grant.[25] Nonetheless, for the time being it is clear that patents are being granted in relation to the different fields of technology which are relevant to climate change.[26] Further, this is likely to continue, with, for example, the UK Intellectual Property Office setting up in 2009 new procedures to enable an application to be considered as quickly as possible and establishing in June 2010 'a new database of green inventions'.[27]

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[22] Cf concerns of developing economies where there may be less expertise and ability to fund new research and development, rather than use that which is already patented—see Littleton, M. (2008) 'The TRIPS Agreement and Transfer of Climate-Change-Related Technologies to Developing Countries' DESA Working Paper No. 71 <www.un.org/esa/desa/papers/2008/wp71_2008.pdf>; Gueye, M.K. (2009) 'Technologies for Climate Change and Intellectual Property Issues for Small Developing Countries' <ictsd.org/i/publications/57611/> and Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>. The steps taken from this perspective at Cancún in relation to access to essential medicines are discussed below. Note also article 66.2 Agreement on Trade Related Aspects of Intellectual Property Rights <www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm> ('TRIPS')

[23] For discussion of patents more generally, see Cornish, W.R and Llewelyn, D. (2007) (6th edn) *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* Thomson Sweet & Maxwell, UK, chapters 3-7.

[24] See Cornish, W.R and Llewelyn, D. (2007) (6th edn) *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* Thomson Sweet & Maxwell, UK chapters 4 and 5. From the UK perspective, see sections 1-4 UK Patents Act 1977 and the international perspective, discussed further later in this piece, see article 27 Agreement on Trade Related Aspects of Intellectual Property Rights <www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm>.

[25] Derclaye, E. 'Should patent law help cool the planet? An inquiry from the point of view of environmental law' Part 1 E.I.P.R. 2009, 31(4), 168-184 and Part 2 E.I.P.R. 2009, 31(5), 227-235

[26] For discussion as to patenting practises, eg Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742> p3-16. For some examples see United States Patent 6475411 Method of making improved gas storage carbon with enhanced thermal conductivity, with a filing date from 2000 <www.freepatentsonline.com/6475411.html> and see eg See US Patent Application US 2009/0177569 A1, published 9 July 2009 for 'Water Alternation Structure Risk Management or Ecological Alteration Management Systems and Methods', Available via <www.ipwatchdog.com/patents/US20090177569.pdf>.

[27] See 2009 Press Release of the UK Intellectual Property Office <www.ipo.gov.uk/about/press/press-release/press-release-2009/press-release-20090512.htm> and discussion in Derclaye, E. 'Not Only Innovation but also Collaboration, Funding, Goodwill and Commitment: Which Role for Patent Laws in Post-Copenhagen Climate Change Action' 9 J.Marshall Rev. Intell. Prop. L. 657 (2010). See also Press Release <www.ipo.gov.uk/about/press/press-release/press-release-2010/press-release-20100604.htm>.

The power of a patent owner means that a business, funder or indeed non-governmental organisation or government would be unwise to ignore any patents which may seem relevant to the proposed activity.[28] Yet the power is not unfettered. Patents can only control the use of the invention itself (say, a specific form of harnessing wave power), and not the wider field of technology (say, use of waves to generate power). The meaning of the scope of the invention (what particular form of harnessing waves is claimed) can be very unclear, however, and frequently gives rise to lengthy litigation.[29] Patents are also national rights, with a patent in the UK obtained against the backdrop of Scotland's significant natural wave resources, unable to prevent activity in, say, Australia or Ecuador. One patent could, however, be an important block on global initiatives to work with wave power. Patents do not last forever, with the term in most countries is 20 years[30]—yet this is likely to be irrelevant when a timely solution is sought, such as in climate change. There are exceptions to patents, for example in relation to private activity and research.[31] These do not, however, cover immediate business activity of others and there is also a marked lack of certainty as to what it meant by 'research', say in relation to university activity or commercial testing.[32] Finally, even if a patent infringed a court will not necessarily require that the conduct cease—although it may do so.[33]

If these restrictions on patents do not, as is suggested, provide adequate comfort to those considering a project, more specific legislation may be of assistance in requiring a patent owner to share the technology. For example, in the UK, the Patents Act 1977 provides that when there is demand for an invention, and after three years from grant the patent owner is

[28] See eg Evans, V. 'Beware infringing CCS patents' 12 February 2010 'Utility Week' <www.utilityweek.co.uk/features/uk/beware-infringing-ccs-patents.php>.
[29] Eg *Kirin-Amgen Inc v Transkaryotic Therapies Inc (No.2)* [2005] R.P.C. 9. For discussion of patents in relation to HCFC technologies which had been developed in the light of the Montreal Protocol, see disputes in Australia: ICI Chemicals Polymers Ltd v Lubrizol Corp Inc [1999] FCA 345 (31 March 1999) and ICI Chemicals Polymers Ltd v Lubrizol Corporation Inc [2000] FCA 1349 (20 September 2000).
[30] Article 33 TRIPS
[31] Article 30 TRIPS provides a basis for this, which is discussed further below in relation to Canadian legislation. For an example of national legislation, see section 60(5) UK Patents Act 1977.
[32] See eg in England *Monsanto Co v Stauffer Chemical Co* [1985] R.P.C. 515, *Corevalve Inc v Edwards Lifesciences AG* [2009] F.S.R. 8 and for a comparative approach between the UK and US perspectives, see Wolf, R. L. 'Microbicide development: an argument for broadening the experimental use exception' . J.I.P.L.P. 2009, 4(7), 485-498. See also UK consultation <www.ipo.gov.uk/press/press-release/press-release-2008/press-release-20080707.htm>.
[33] See Firth, A. '"Holding the Line"—The Relationship between the Public Interest and Remedies Granted or Refused, be it for Breach of Confidence or Copyright' 421 in Torremans, P.L-C. (ed) (2008) *Intellectual Property and Human Rights. Enhanced Edition of Copyright and Human Rights* Kluwer Law International, The Hague, The Netherlands and in the United States, *EBay Inc v Mercexchange LLC* <docs.justia.com/cases/supreme/slip/547/05-130/full.pdf>.

not meeting that demand, then another party can apply for a 'compulsory licence'—and if terms cannot be agreed they can be imposed by a tribunal or ultimately a court.[34]

In a fast moving industry and in an area where a timely international response is sought, waiting for three years will not be a complete solution. It could be argued, therefore, that states could take a more interventionist approach to patents, and require technology to be shared, against the will of the patent owner, if this could assist states in meeting international obligations. This raises an important issue, which will also be considered in more detail at the end of this paper and which will be explored in the project. What is meant by a technology that is important for climate change? Who is to assess this? Would it cover all technologies which could have an impact on climate change? All technologies which are claimed to be environmentally sustainable? What impact would this have on the role of IP in encouraging innovation and investment in climate change and environmental technologies? For now, the proposal will be discussed from the perspective of other international obligations and fora.

So, could states which have ratified the Kyoto Protocol pass legislation, which requires that all technologies which the relevant government department has designated as being essential for the path the state has chosen to meet obligations under the Kyoto Protocol, are to be available to all businesses and authorities who wish them, for payment of a nominal royalty?[35] Regard will be had first to relationship between this and international IP obligations.

3. The impact of the international IP regime

3.1 TRIPS and compulsory licensing

The World Trade Organization ('WTO') Agreement includes the Agreement on Trade Related Aspects of Intellectual Property Rights ('TRIPS').[36] As the vast majority of other

[34] Section 48 et seq Patents Act 1977. Note also section 55-8 regarding use of patented technology by the Crown. This legislation and its predecessors and similar instruments have been the subject of discussion and controversy regarding workability, see Thorley. S et al (eds) (2006) (16th edn) *Terrell on the Law of Patents*, Thomson/Sweet & Maxwell, UK, chapter 11 and *Smith Kline & French Laboratories Ltd Cimetidine Patent (No.2)* [1990] R.P.C. 203; also *Allen & Hanburys Ltd's (Salbutamol) Patent* [1987] R.P.C. 327.

[35] For early discussion of this option in this sector, see Gormley, P. 'Compulsory Patent Licenses and Environmental Protection' Winter 1993 7 *Tul. Envtl. L. J.* 131.

[36] <www.wto.org/english/tratop_e/trips_e/t_agm0_e.htm>. The WTO is also important for other aspects of climate change—see eg Howse, R. and Eliason, A. L. 'Domestic and international strategies to address climate

Kyoto states are also members of the WTO,[37] states wishing to take a proactive approach to Kyoto will also have obligations under TRIPS. TRIPS imposes mandatory obligations in respect of the levels of IP protection which members are to provide.[38] It does also permit legislation relating to compulsory licensing of patents in some circumstances.

Thus, article 31 states that

> Where the law of a Member allows for other use[39] of the subject matter of a patent without the authorization of the right holder, including use by the government or third parties authorized by the government, the following provisions shall be respected:
>
> > (b) use may only be permitted if, prior to such use, the proposed user has made efforts to obtain authorization from the right holder on reasonable commercial terms and conditions and that such efforts have not been successful within a reasonable period of time. This requirement may be waived by a Member in the case of a national emergency or other circumstances of extreme urgency or in cases of public non-commercial use. In situations of national emergency or other circumstances of extreme urgency, the right holder shall, nevertheless, be notified as soon as reasonably practicable.
> >
> > (c) the scope and duration of such use shall be limited to the purpose for which it was authorized
> >
> > (h) the right holder shall be paid adequate remuneration in the circumstances of each case, taking into account the economic value of the authorization

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change : an overview of the WTO legal issues' in Cottier, T et al (eds) (2009) *International Trade Regulation and the Mitigation of Climate Change. World Trade Forum* Cambridge University Press, Cambridge, UK

[37] WTO members—<www.wto.org/english/theWTO_e/whatis_e/tif_e/org6_e.htm>. See also fn 4.

[38] For consideration see Janis, M.D. '"Minimal" Standards for Patent-Related Antitrust Law under TRIPS' 774 in Maskus/Reichman. For commentary and criticism of the imbalance between the mandatory and the optional, see Sell, S.K. (2003) *Private Power, Public Law. The Globalization of Intellectual Property Rights* Cambridge University Press, Cambridge, UK.

[39] 'Other use' refers to use other than that allowed under Article 30 *[this note exists in text of article 31. Article 30 is discussed later in this paper]*.

Regarding the possible example, key questions regarding these parts of article 31 might be: what is adequate remuneration, from an economic perspective—could it be a nominal royalty? Given the dynamic nature of climate change work, might there quickly be use beyond the purpose for which there is authorisation? And likely most significantly, is dealing with climate change in this manner, or indeed at all, really 'a national emergency or other circumstances of extreme urgency'? Is there an alternative technology or approach which could be used (say carbon capture storage, encouragement of insulation or, indeed, arguments that addressing climate change is not urgent)?

These questions are important, as if another WTO member considers that a state has acted inconsistently with its obligations under TRIPS—say by a creative approach to compulsory licensing as suggested—a challenge can be made through the WTO Dispute Settlement System.[40] A finding against a state could lead to trade sanctions or suspension measures, for example a state refusing to grant IP to businesses from a state.[41]

Experiences in another area of conflict between TRIPS and other interests, access to essential medicines, suggest that even if a state considers that Kyoto obligations mean that article 31 is satisfied, not all states are likely to agree.[42] A landmark example is that in 1997, South Africa passed legislation regarding the compulsory licensing of patented treatments, to assist in treatment of HIV/AIDS.[43] The legislation was challenged by a group of pharmaceutical companies in the South African courts, making arguments based on TRIPS. The case was

[40] Dispute Settlement Understanding ('is Annex 2 to the WTO Agreement <www.wto.org/english/docs_e/legal_e/28-dsu_e.htm>. For resources regarding dispute resolution, see <www.wto.org/english/tratop_e/dispu_e/dispu_e.htm>.

[41] See eg Warren F. Schwartz and Alan O. Sykes (2002) 'The Economic Structure of Renegotiation and Dispute Resolution in the World Trade Organization' *Journal of Legal Studies*, XXXI (1, Part 2), January, S179-S204, 52 and Steve Charnovitz (2001) 'Rethinking WTO Trade Sanctions' *American Journal of International Law*, 95(4), October, 792-832, 247) both in Mavroidis, P.C. and Sykes, A.O. (eds) (2005) *The WTO and International Trade Law/Dispute Settlement* Edward Elgar, Cheltenham, UK and Northampton, MA, USA; regarding TRIPS remedies, see Grosse Ruse-Kahn, H. 'A pirate of the Caribbean? The attractions of suspending TRIPS obligations' J.I.E.L. 2008, 11(2), 313-364.

[42] There is a wealth of literature on this issue—see for example Gathii, J.T. 'Approaching to Accessing Essential Medicines and the TRIPS Agreement' 393 in Yu, P. (ed) (2007) *Intellectual Property and Information Wealth. Issues and Practices in the Digital Age. Volume 4: International Intellectual Property Law and Policy* Praeger Perspectives, Praeger, Westport, Connecticut, USA and London, UK; and Hestermeyer, H. (2007) *Human Rights and the WTO. The Case of Patents and Access to Medicines* Oxford University Press, New York, USA , chapters 1 and 4. For discussion of the relevance of this in relation to climate change, see Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

[43] Medicines and Related Substances Control Act 1965 as amended by the Medicines and the Related Substances Control Amendment Act 1997.

settled without a court decision, but there is a strong consensus that this legislation likely was consistent with South Africa's obligations under TRIPS, in the light of article 31.[44]

A key factor in triggering that settlement was the international outcry[45] provoked by the challenge. This continued after the settlement and led to wider challenge to IP and its impact, which is also relevant to the present discussion. In 2001, the outcry led to the Declaration on the TRIPS Agreement and Public Health, passed by the WTO at Doha. This confirmed[46] that TRIPS does indeed permit states to impose compulsory licences to deal with public health emergencies to enable local manufacturers to make patented technology, and also that public health crises can represent a national emergency or other circumstances of extreme urgency.[47]

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[44] Murakyembe, H. and Kanja, G.M. 'Implications of the TRIPS Agreement on the Access to Cheaper Pharma Drugs by Developing Countries: Case Study of South Africa v The Pharmaceutical Companies' Zambia Law Journal vol 34, 2002, 111 and Cameron, E. and Berger, J. 'Patents and Public Health: Principle, Politics and Paradox' Inaugural British Academy Law Lecture <www.law.ed.ac.uk/ahrc/script-ed/docs/cameron.asp>

[45] See Matthews, D. 'The Role of International NGOS in the Intellectual Property Policy-making and Norm-Setting Activities of Multilateral Institutions' 2007 82(3) Chi-Kent Law Review 1369-1387 ; Abbott, F.M. 'Trade Diplomacy, the Rule of Law and the Problem of Asymmetric Risks in TRIPS' (2003) Quaker United Nations Office Occasional Paper 13 available at <www.quno.org/geneva/pdf/economic/Occassional/Asymmetric-Risks-in-TRIPS.pdf>.

[46] World Trade Organization 'Declaration on the TRIPS agreement and public health' DOHA WTO MINISTERIAL 2001: TRIPS. Adopted on 14 November 2001. WT/MIN(01)/DEC/2 20 November 2001 <www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm>. For full consideration of the Doha Declaration and subsequent developments, see Hestermeyer, H. (2007) *Human Rights and the WTO. The Case of Patents and Access to Medicines* Oxford University Press, New York, USA, 255-87

[47] This was noted to be of little help for those states with limited manufacturing capacity; and in 2003 there was a Decision at Cancún which looked beyond the present scope of TRIPS. This permitted the states to permit manufacture of drugs for export to and import by countries where there was a public health emergency, and where complex preliminary procedures were observed. World Trade Organization 'Implementation of paragraph 6 of the Doha Declaration on the TRIPS agreement and public health' Decision of the General Council on 30 August 2003 WT/:/540 and Corr.1 <www.wto.org/english/tratop_e/trips_e/implem_para6_e.htm> and Chairperson's statement 13 November 2003 WT/GC/M/82 <www.wto.org/english/tratop_e/trips_e/gc_stat_30aug03_e.htm> and World Trade Organization Ministerial statement adopted 14 September 2003 <www.wto.org/english/thewto_e/minist_e/min03_e/min03_14sept_e.htm>. For details of the use made of this, see 'TRIPS and public health: dedicated webpage for notifications' <www.wto.org/english/tratop_e/trips_e/public_health_e.htm>. See webpage 'Notifications by exporting WTO Members' <www.wto.org/english/tratop_e/trips_e/public_health_notif_export_e.htm> and Notifications by importing WTO Members' <www.wto.org/english/tratop_e/trips_e/public_health_notif_import_e.htm>. A formal amendment to TRIPS in these respects has been agreed, with a deadline for acceptance of 2011. World Trade Organization Decision of the General Council 6 December 2005 'Amendment of the TRIPS Agreement' WT/L/641 <www.wto.org/english/tratop_e/trips_e/wtl641_e.htm> and Chairperson's statement <www.wto.org/english/news_e/news05_e/trips_319_e.htm>. For status update, see <www.wto.org/english/tratop_E/trips_e/amendment_e.htm>. Alcorn, K. (2006) '2001 Doha trade agreement failing to improve access to medicines Oxfam says' <www.aidsmap.com/en/news/32E9675E-B18A-4841-8947-BDDC37AD42DD.asp>. For review of effectiveness, see Abbott, F. and Reichman, J. 'The Doha Round's public health legacy: strategies for the production and diffusion of patented medicines under the amended TRIPS provisions.' J.I.E.L. 2007, 10(4), 921-987 and Kuanpoth, J. 'Patents and access to medicines in Thailand—the ddI case and beyond.' I.P.Q. 2006, 2, 149-158.

The Doha Declaration does not address what else would be a 'national emergency or other circumstances of extreme urgency or in cases of public non-commercial use'—and it is these parts of article 31 TRIPS on which guidance would have assisted from a climate change perspective. The Declaration in itself does, however, support arguments that states can indeed impose limits on the rights of patent owners by way of compulsory licence. Doha has also been used to support calls by policymakers and academics for a declarations in relation to climate change,[48] which is also considered further below.

3.2 Other TRIPS opportunities

Nonetheless, this paper has identified some uncertainties as to whether or not article 31 TRIPS would support the initiative proposed. Does this international IP agreement have other provisions which might assist? The same issue was considered regarding creative legislation passed by Canada. Canada sought to facilitate quicker access to products in its pharmaceutical industry by passing legislation enabling generic manufacturers (that is, those other than the patent owner) to take steps towards obtaining regulatory clearance and manufacturing products before patents had expired. This meant that as soon as a patent expired, they could enter the market using the technology which had been patented.[49] Other members of the WTO complained to the WTO dispute settlement body. The panel found that part of the Canadian initiative (that relating to regulatory clearance) was consistent with Canada's obligations under TRIPS, but that the rest was not.[50]

This case involved articles 30, 7 and 8 TRIPS.[51] Article 30 states

> Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.

[48] Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' http://ictsd.org/i/publications/50454/
[49] *Canada — Patent Protection of Pharmaceutical Products* DS 114 http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds114_e.htm ('Canada')
[50] Canada paras 7.19-26, 7.68, 7.84, 7.89, 7.91 and 7.92
[51] Cf article 31 TRIPS, see Canada summaries of arguments at pp 14, 22, 76-7, 92-5, 103, 106-8, 110, 120, 139,142,147, 152.

Article 7 provides that IP

> should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations

Article 8 states that:

> members may adopt measures necessary to … promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.

These provisions might seem promising for those wanting to limit the power of patent owners. In marked contrast to the provisions requiring states to have patent protection, however, these provisions do not impose mandatory obligations on states.[52] Consistent with this, the WTO panel found that article 7 and 8 should be taken into account in interpreting article 30 TRIPS, but that a decision could still be reached which seemed inconsistent with article 7 and 8 TRIPS. Commentators have argued that the panel viewed the interests of the patent owner as more important than other interests, that this was incorrect, and also that it is different from the stance taken by decision makers considering very similar provisions in relation to trade marks and copyright.[53]

The decision remains, however, and confirms that although there are provisions in TRIPS other than article 31 which permit legislative creativity, other states might challenge this; and

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[52] Correa, C. M. 'Pro-competitive Measures under TRIPS to Promote Technology Diffusion in Developing Countries' 40 in Drahos, P and Mayne, R. (eds) (2002) *Global Intellectual Property Rights. Knowledge, Access and Development* Palgrave Macmillan, Basingstoke, UK and New York, USA and Correa, C.M. 'Can the TRIPS Agreement Foster Technology Transfer to Developing Countries' 227 in Maskus, K.E. and Reichman, J.H. (eds) (2005) *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime* Cambridge University Press, Cambridge, UK.

[53] See Senftleben, M. 'Towards a horizontal standard for limiting intellectual property rights?—WTO panel reports shed light on the three step test in copyright law and related tests in patent and trade mark law' IIC 2006, 37(4), 407-438, 409, 412, 413, 417-9, 422-3, 428-31; Dinwoodie, G. and Dreyfuss, R. C. 'Designing a Global Intellectual Property System Responsive to Change: The WTO, WIPO and Beyond' (2009) 46 Houston Law Review 1187-1234, available at <papers.ssrn.com/sol3/papers.cfm?abstract_id=1502262>. Note also *European Communities—Measures Concerning Meat and Meat Products (Hormones)* DS 48 <www.wto.org/english/tratop_e/dispu_e/cases_e/ds48_e.htm> Appellate Body report, section IV, which provides that exceptions provisions are not to be interpreted more narrowly than those imposing obligations.

that if this is done the patent, rather than climate change, technology transfer and public interest, may be considered more important.

This focus is perhaps not surprising, given that TRIPS is an IP treaty. But what is, or should be, the relationship between TRIPS and other existing international regimes—and what use can be made of this now regarding legislative creativity?

4. Climate Change and IP

From early in the international climate change process[54]—much earlier than was the case in public health[55]—the potential for a conflict with IP was recognised. The Agenda 21 for Change of 1992[56] stated:

> Governments and international organizations should promote the transfer of environmentally sound technologies that are not covered by patents or lie in the public domain. They should also purchase patents and licenses on commercial terms and transfer them to developing countries on non-commercial terms as part of assistance for sustainable development. Intellectual property rights should be protected in such transfers.[57]

The UNFCC and the Kyoto Protocol do not refer to IP, but IP was referred to, in a rather parallel manner, in the Marrakech Accord of 2001.[58] This refers to 'protecting IP'. There is more recognition of a need to address IP in the proceedings of the SBSTA in May 2007 in Bonn and in December 2007 in Bali, which encouraged parties avoid IP policies restricting the transfer of technology.[59] Further, as the Copenhagen meeting approached, in November 2009 the Ad Hoc Working Group on Long-Term Cooperative Action stressed 'the need to

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[54] See also Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742> p17, 20

[55] Drahos, P. 'Negotiating Intellectual Property: Between Coercion and Dialogue' 161 in Drahos, P and Mayne, R. (eds) (2002) *Global Intellectual Property Rights. Knowledge, Access and Development* Palgrave Macmillan, Basingstoke, UK and New York, USA.

[56] See <www.iisd.org/rio%2B5/agenda/agenda21.htm>.

[57] Agenda 21, Article 34 paragraph 5

[58] COP 7 Annex 'Framework for meaningful and effective actions to enhance the implementation of Article 4, paragraph 5, of the Convention' <unfccc.int/resource/docs/cop7/13a01.pdf#page=22>, p24 article 14(a)

[59] Recommendations for Enhancing the Implementation of the Framework for Meaningful and Effective Actions to Enhance the Implementation of Article 4, Paragraph 5 of the Convention <unfccc.int/resource/docs/2007/sbsta/eng/04.pdf>, p21 article 12(b); and COP 13 Bali 'Development and transfer of technologies under the Subsidiary Body for Scientific and Technological Advice' <unfccc.int/files/meetings/cop_13/application/pdf/cp_tt_sbsta.pdf> 12(b).

ensure that international rights and obligations relating to intellectual property are supportive of and do not run counter to the objectives of the Convention'. It argued for the removal of barriers to transfer of technology, mandatory exclusion from patenting of some climate friendly technologies or the establishment of a pool to ensure access to knowledge, for developing countries to have the right to take full advantage of the flexibilities permitted by international IP agreements, for more licensing of IP and more generally for measures to address IP.[60]

The Ad Hoc Working Group also put forward some more detailed proposals, although as they were not agreed, these were included in square brackets as is customary. In the November 2009 documents, it attacked the question directly and suggests that any international IP agreement shall not be interpreted or implemented in a manner which prevents a state taking steps in relation to climate change.[61] In a document of the group from December 2009,[62] there was more discussion of IP—but again no agreement. There are references in square brackets to licensing and other IP issues[63] and to having regard to IP issues when they arise.[64] There is also, again in square brackets, an entire section about IP regarding interpretation of agreements on IP, steps to avoid barriers to transfer of technology, a pool ensuring wider access to IP for developing countries on royalty free terms, no patenting and full use of flexibilities in TRIPS. Finally and importantly, there is another set of square brackets which suggests making no references to IP at all.[65] The EGTT Chair's report of December 2009 is much vaguer, referring to the positive contribution made by IP, the need for ongoing regard to IP in discussions with the business community, and also co-operation with other organizations, including the WIPO.[66]

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[60]Non paper 47 <unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/awglcattnp47061109.pdf>, non paper for the November 2009 meeting in BarcelonaP9 Option 2 paras 9bis, para 10bis .1; P10 option 2, para 10bis.2; P10 option 2, para 10bis.3; P12, para 12 Sub-Option 2(f); P16 Appendix Option 1 (Executive Body on Technology) para 4, p17 para 2(b), p22 para 2 regarding Functions of Technology Innovation Centres; and P20 (b)(v) and p21 para10, regarding national Technology Action Plans.

[61] Non paper 47, P9, Option 2, para 10.bis.

[62] Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its eighth session, held in Copenhagen from 7 to 15 December 2009. <unfccc.int/documentation/documents/advanced_search/items/3594.php?rec=j&priref=600005684&suchen=n>.

[63] Ad Hoc Working Group December 2009, Article 6(f).

[64] Ad Hoc Working Group December 2009, Article 10(j).

[65] Ad Hoc Working Group December 2009, Article 17.

[66] <unfccc.int/resource/docs/2009/sb/eng/inf06.pdf>, esp para 42, 46.

As was noted at the start of this piece, no firm agreement was reached at the meeting of the parties at Copenhagen and there was therefore no opportunity to make statements in favour or, or against, IP. As also noted, the Copenhagen Accord which did result does not refer to IP. This could be viewed as the unavoidable result of a wider lack of agreement, as can be seen from the documents discussed above. This should also be viewed, however, against the backdrop of strong arguments made against the UNFCCC taking a proactive approach to the sharing of IP. Notably, the United States made clear in the pre-Copenhagen discussions of the EGTT in Bonn in May 2009,[67] at Bangkok in September 2009[68] and at Barcelona in November 2009 (with a letter sent from US Senators to the US President),[69] that the United States did not support restrictions on the power of patent owners to enable wider access to climate change technologies. IP was also not on the agenda of the meeting of the EGTT in Sydney in February 2010.[70] IP will be considered, however, by the Ad Hoc Working Group at the UNFCCC climate change meetings in Bonn in May and June 2010.[71] The outcome is awaited with interest.

It should also be borne in mind that Kyoto and the UNFCCC have much less forceful dispute resolution provisions than TRIPS. Rather than there being trade sanctions, compliance is encouraged against the backdrop of possible conciliation and a reference by the parties to the International Court of Justice—if the parties should consent.[72] The potential for a clash between IP and climate change continues, therefore; and even if a firmer statement is made at the UNFCCC in relation to IP in the future, building on Bonn, this will have little force without changes to the dispute resolution systems.

Can stronger support come from other legal regimes? The next section will consider the contribution which may be made by human rights.

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[67] Agenda at <unfccc.int/ttclear/jsp/EGTTDoc/Agenda-3.pdf>.
[68] Agenda at <unfccc.int/ttclear/jsp/EGTTDoc/DEVELOPMENT%20AND%20TRANSFER%20OF%20TECHNOLOGIES.pdf>.
[69] See letter from US Senators to the President of the United States sent 2 November 2009 <www.ip-watch.org/weblog/wp-content/uploads/2009/11/110209obamasenateletter1.pdf> referring repeatedly to weakening IP.
[70] See Agenda for the meeting, <unfccc.int/ttclear/jsp/EGTTDoc/EGTT%20Australia-provisional%20agenda-v8.pdf>.
[71] For details of documents for discussion see <maindb.unfccc.int/library/view_pdf.pl?url=http://unfccc.int/resource/docs/2010/awglca10/eng/06.pdf> p23 para 4(f) refers in square brackets to purchasing IP, p24 para7(h) refers square brackets to addressing IP as it arises; p25 para 11 in square brackets suggests either no reference to IP or again proposed a new interpretative approach to IP treaties, as discussed above.
[72] UNFCC art 14, Kyoto art 19.

5. Human rights

5.1 Why look to human rights?

Looking to human rights would be consistent with increasing regard to human rights as a tool for encouraging respect for important international goals: for example, the UN Millennium Goals are based on respect for human rights[73] and the World Summit on the Information Society (whose work continues through the Internet Governance Forum) seeks to use human rights as a basis for addressing the digital divide.[74]

In relation to climate change, the United Nations Human Rights Council passed resolutions in 2008 and 2009.[75] At international level[76] there are some specific instruments with the UN Stockholm Declaration on the Environment 1972[77] and the Rio Declaration on Environment and Development 1992;[78] and the human rights to life and health found in the International Covenant on Civil and Political Rights[79] and the International Covenant on Economic Social and Cultural Rights,[80] both of 1966, can be argued to be relevant.[81] In this respect, there is a growing body of scholarship discussing the unclear relationship between human rights and the environment.[82]

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[73] <www.un.org/millenniumgoals/bkgd.shtml>.
[74] WSIS Geneva Declaration available at <www.itu.int/wsis/docs/geneva/official/dop.html>, paras 1, 2 and 4
[75] For discussion of the United Nations activities, see <www2.ohchr.org/english/issues/climatechange/index.htm>. See also International Council on Human Rights (2008) 'Climate Change and Human Rights A Rough Guide' available via <www.ichrp.org/en/projects/136> (see also details of ongoing work on project).
[76] Note also Article 37, the Charter of Fundamental Rights of the European Union ('EU Charter') O.J. C 303/01 14.12.2007 and (non binding) explanations relating to the Charter of Fundamental Rights at O.J. C 303/02 14.12.2007 which forms part of the new Treaty on the Functioning of the European Union O.J. 9.5.2008 115/47 <eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:115:0047:0199:EN:PDF> and Article 16 and 24 the African Charter of Human and Peoples' Rights of 1981 and OAU Doc. CAB/LEG/67/3 rev. 5, 21 I.L.M. 58
[77] <www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503&l=en>.
[78] <www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163l>.
[79] 999 U.N.T.S. 171. ICCPR, article 6.
[80] 003 UNTS 3 ICESCR, article 12.
[81] Regarding states who are parties, see Office of the United Nations High Commissioner for Human Rights 'Status of Ratifications of the Principal Human Rights Treaties as of 09 June 2004' http://www.unhchr.ch/pdf/report.pdf. For reservations by some states see United Nations Treaty Collection Declarations and Reservations as of 5 February 2002 http://www.unhchr.ch/html/menu3/b/treaty5_asp.htm
[82] See discussion in Stallworthy, M. Whither environmental human rights? Env. L. Rev. 2005, 7(1), 12-33; Boyle, A. 'Human Rights or Environmental Rights? A Reassessment' (2007) *Fordham Environmental Law Review* Vol XVIII, pp.471-511; and Trilsch, M. 'European Committee of Social Rights: the right to a healthy environment' I.J.C.L. 2009, 7(3), 529-538. More detailed discussion as to the relationship between the environment and human rights can be found on the working page of the University of Edinburgh project 'Legal

Further, human rights have been used specifically to challenge some impacts of IP. For example, in the UK Commission on Intellectual Property and Development[83] and in the Adelphi Charter,[84] reference is made to human rights in the context of encouraging wider access to the proceeds of innovation and creativity. Human rights have also been identified in leading work as a means of contributing to the debate regarding IP and climate change.[85] Looking to human rights in this debate could be seen, however, as opening Pandora's Box. There are arguments that there is human right to IP, based on ICESCR rights[86] to share in cultural life, to enjoy the benefits of scientific progress and its applications, and to the moral and material interests resulting from any scientific, literary or artistic production of which a person is the author.[87] At international level[88] what is the impact of all these rights in relation to access to climate change technologies?

Framework on Human Rights and the Environment Applicable to European Enterprises Operating Outside the European Union' <www.law.ed.ac.uk/euenterpriseslf/>.

[83] UK Commission on Intellectual Property Rights, 'Integrating Intellectual Property Rights and Development Policy' September 2002 <www.iprcommission.org>, p6 and 7

[84] <sitoc.biz/adelphicharter/adelphi_charter.asp.htm> preamble para 3, and Charter para 2

[85] See introductory references in Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

[86] ICESCR, article 15(1)(a) and (b)ICESCR, article 15(1)(c) Chapman, A.R 'Approaching intellectual property as a human right: obligations related to Article 15(1)(c)' Copyright Bulletin, vol XXXV No. 3, July-September 2001 UNESCO Publishing; CIPR p6; For more detailed discussion, see Torremans, P.L-C. (ed) (2008) *Intellectual Property and Human Rights. Enhanced Edition of Copyright and Human Rights* Kluwer Law International, The Hague, The Netherlands; Grosheide, W. (ed) (2009) *The Human Rights Paradox in Intellectual Property* Edward Elgar, UK

[87] There is also a right in ECHR Protocol 1, article 1—right to enjoyment of property, which the ECtHR held was a right to property *Marckx v Belgium* (A/31) (1979-80) 2 E.H.R.R. 330 , para 63; *Anheuser-Busch Inc v Portugal* (73049/01) [2007] E.T.M.R. 24 (2007) 45 E.H.R.R. 36 confirmed that this right applied to an application for a trade mark. For comprehensive analysis of decisions of European human rights bodies in relation to IP, see Helfer, L.R. 'The New Innovation Frontier? Intellectual Property and the European Court of Human Rights' Harvard Journal of International Law Vol 49. No. 1 Winter 2008. EU Charter, article 17(2) states 'intellectual property shall be protected' discussion in MacCormick, N. 'Human Rights and Competition Law: Possible Impact of the Proposed EU Constitution' , (2005) 2:4 *SCRIPTed* 444: <www.law.ed.ac.uk/ahrc/script-ed/vol2-4/maccormick.asp> and Geiger, C. 'Intellectual property shall be protected!? Article 17(2) of the Charter of Fundamental Rights of the European Union: a mysterious provision with an unclear scope' E.I.P.R. 2009, 31(3), 113-117.

[88] The use which can be made of rights in international instruments at national and regional level varies between jurisdiction—for introduction, see Brownlie, I. (2003) *Principles of public international law* Oxford University Press, UK), 44 et seq. Within the framework of an IP action, there is no scope for the wider public engagement as is contemplated by the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters http://www.unece.org/env/pp/. There have been some example of national courts using national and regional human rights in IP actions, however in most cases this has been of very little effect, largely because of the limits included in IP rights themselves: *Biogen Inc v Medeva Plc* [1993] R.P.C. 475 and *Roussel-Uclaf v GD Searle & Co Ltd (No.1)* [1977] F.S.R. 125; *Glaxo Group Ltd v Dowelhurst Ltd* [2005] E.T.M.R. 104. See also *Merck & Co Inc v Primecrown Ltd* (C267/95) [1996] E.C.R. I-6285, Opinion of Advocate General Fennelly (paras 45, 54, 56, 61, 89-98, 100-66 cf Judgment of the ECJ, paras 30-3, 36-7; *Levi Strauss & Co v Tesco Stores Ltd* [2002] EWHC 1625 (Ch) [2002] 3 C.M.L.R. 11 [2003] R.P.C. 18 (England); *Harper & Row v Nation Enterprises* 471 U.S. 539 (United States); *Cie Generale Des*

5.2 Human rights, IP and climate change

The United Nations Sub-Commission on the Promotion and Protection of Human Rights targeted IP in 2000 and 2001, passing resolutions expressing concern at the manner in which states had chosen to implement TRIPS. The High Commissioner issued a report in similar vein. These documents note that there is too much of a focus on companies and control of technology, rather than on states pursuing the flexibilities within TRIPS and the social function of IP, and the position of persons other than the IP owner.[89] This stance to IP seems helpful for those trying to challenge its impact.

In 2001 again, the UN Committee on Economic Social and Cultural Rights[90] issued a statement 'Human Rights and Intellectual Property'.[91] This was followed in November 2005 by a General Comment. These considered the right in respect of the protection of moral and material interests which was found to be a human right. It was considered, however, to be inherent to humans (not companies) and was linked in a mutually reinforcing and reciprocally limitative relationship with other rights, to take part in cultural life and sharing in the benefits of scientific progress, rights to expression and information and also to own property. This right was distinguished from IP rights, which it considered were limited and created artificially by the state to encourage innovation, and should not impede the state's activities

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Establishments Michelin—Michelin & Cie vs CAW—Canada (T.D.) T-825-94 [1997] 2 F.C. 306 1996 F.C. LEXIS 199 (Canada). There have been some indications, however, that human rights can in some rare cases led to courts taking a different approach: *Ashdown Telegraph Group Ltd* [2001] EWCA Civ 1142 [2002] Ch. 149; *Laugh it Off Promotions CC v South African Breweries International (Finance) BV T/A SAB International* CCT42/04 available at <www.constitutionalcourt.org.za/uhtbin/cgisirsi/x/0/0/5/0>; *Suntrust Bank v Houghton Mifflin Co*., 268 F.3d 1257; and *Holliday v CNN*, this case is unreported, see detailed analysis of the transcript in Reis, L. A. 'The Rodney King Beating—beyond fair use: a broadcaster's right to air copyrighted videotape as part of a newscast.' Winter, 2005 13 J. Marshall J. Computer & Info. L. 269, 272, 284 et seq.

[89] United Nations High Commissioner for Human Rights, Intellectual Property and human rights, Sub-Commission on Human Rights Resolution 2000/7 <www.unhchr.ch/Huridocda/Huridoca.nsf/0/c462b62cf8a07b13c12569700046704e?Opendocument> final recital and articles 1-5; Sub-Commission on Human Rights Resolution 2001/21 <www.unhchr.ch/Huridocda/Huridoca.nsf/(Symbol)/E.CN.4.SUB.2.RES.2001.21.En?Opendocument> paras 13, 10, 9; and United Nations Commission on Human Rights Sub-Commission for the Promotion and Protection of Human Rights. Report of the High Commissioner. The Impact of the Agreement on Trade-Related Aspect of Intellectual Property Rights on human rights June 2001 <www.unhchr.ch/Huridocda/Huridoca.nsf/e06a5300f90fa0238025668700518ca4/590516104e92e87bc1256aa8004a8191/$FILE/G0114345.doc>. See also Sun, H. 'Copyright Law Under Siege. An Inquiry Into the Legitimacy of Copyright Protection in the Context of the Global Digital Divide' IIC 2005 26 (2) 192, 209-10, 212.

[90] Established in 1985 to monitor the implementation of the ICESCR by states.

[91] Statement CESCR 'Human Rights and Intellectual Property' November 2001 E/C. 12/2001/15 <www1.umn.edu/humanrts/esc/escstatements2001.html>.

in relation to other human rights.[92] This again seems of assistance of those wishing to challenge IP.

In summary, therefore, human rights provides a basis for challenging the impact of IP, both in terms of rights which may be affected by the exercise of IP, and providing some international recognition of the conflict. In terms of direct practical impact however, international human rights will, like the UNFCC, be of little direct effect. There is no robust forum within which the international human rights arguments can be advanced as the heart of a complaint. There is a formal process for within which compliance with human rights obligations by states is monitored, however it is much closer to that of the UNFCC, than that of TRIPS. The focus is on reporting, with states wishing and seeking to comply, rather than their being required to do so.[93]

Regard to human rights and to climate change does not provide a practically significant means, therefore, for states to take a different approach to IP than that which is required by TRIPS. The most fruitful course of action within the legal regimes reviewed is still compulsory licensing legislation on the basis of article 31 TRIPS—if a state considers that the requirements are met, and at the risk of a challenge at the WTO by other states. Yet an important piece in this area of work states

> It is essential that IP issues do not become a barrier in technological leapfrogging. The challenge of climate change calls for out of the box thinking to find solutions that can make a difference[94]

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[92] Office of the High Commissioner for Human Rights Committee on Economic Social and Cultural Rights 'The right of everyone to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he or she is the author' General Comment No. 17 (2005) <www.unhchr.ch/tbs/doc.nsf/(Symbol)/E.C.12.GC.17.En?OpenDocument>, see in articles 1-4, 7,10, 22-4 and 35. See Ricketson, S. 'Intellectual Property and Human Rights' 187 in Bottomley, S. and Kinley, D. (eds) (2002) *Commercial Law and Human Rights* Dartmouth Publishing Company, Ashgate Publishing, Hampshire, England and Virginia, USA, 194-7.

[93] There is no complaints procedure for the ICESCR. Re ICCPR, see webpage 'Human Rights Council Complaint Procedure' at <www2.ohchr.org/english/bodies/chr/complaints.htm>, <www.unhchr.ch/html/menu2/8/1503.htm>. The ICCPR has an Optional Protocol for individual complaints and this being consider for the ICESCR <www2.ohchr.org/english/issues/escr/group3.htm>. See also Bowman, M. 'Towards a unified treaty body for monitoring compliance with UN human rights conventions? Legal mechanisms for treaty reform' H.R.L. Rev. 2007, 7(1), 225-249.

[94] Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>, p37.

This point was made in the context of the development of new forms of encouraging innovation, discussed at the start of this piece, and revisions to TRIPS, which are not discussed here.[95] The approach of this paper is to argue for a wider box for those considering access to climate change technologies. The box which has been discussed so far cannot provide a solution. A new approach is required.

6. A new approach

This approach has three elements. Firstly, this paper will develop points previously made about a new declaration relating to climate change and technology; secondly, it will revisit the need for action to be taken in relation to climate change technologies; and thirdly, it will argue that these points suggest that new fields should be included in the box.

6.1 The home of a declaration

As noted above in relation to the Doha Declaration, it has been argued that there could be a declaration relating to climate change and technology. Before the detail of this declaration is considered, there is a preliminary question—where should any declaration may be made?[96]

From the climate change perspective, the most obvious location would be within the UNFCC. As noted, the UNFCC has no real enforcement powers and a UNFCC declaration requiring sharing of the right to use technology may be readily ignored by relying on other international obligations, like TRIPS. Nonetheless, the lack of a declaration requiring sharing within the responsible UN body makes it difficult to argue with any credibility in other fora that compulsory licensing is necessary to address climate change. For this reason, any declaration should be pursued in the UNFCC.

This would be similar to the approach taken in relation to health. At around the same time as the WTO developments at Doha, the World Health Organization ('WHO') launched in 2002

[95] See discussion by the author 'Access to essential technologies: The role of the interface between intellectual property, competition and human rights' (2010) *International Review of Law, Computers and Technology* Volume 24 Issue 1, 51

[96] See also discussion in Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

a joint study with the WTO of the relationship between trade rules and public health[97] and in 2003 established the Commission on Intellectual Property Rights, Innovation and Public Health.[98] This led to reports on alternative forms of encouraging innovation, particularly in relation to diseases where there was less of a commercial incentive, and also encouraged more licensing.

It is noteworthy that these proposals are very similar to those which were discussed (but not progressed) at the UNFCC in relation to climate change. This commission continued its work and led in 2008 to the 'Draft global strategy on public health, innovation and intellectual property'.[99] In contrast to the UNFCC, outputs did result at the WHO, and these were considered to be very exciting.[100] They are similar, in fact, to the flexibilities in TRIPS which had already been confirmed at Doha. Nonetheless, the reaction confirms that if a relevant international forum or fora adopts a new approach which is less focussed on the positive elements of IP, this can send an important message regarding the stance which should be taken to IP.

The other natural home for any declaration may be the original international home of IP, WIPO. A statement from the home of IP can also have an important impact by confirming that IP need not always control access. A declaration at WIPO would also be consistent with efforts to encourage a more equitable approach to IP, notably through the WIPO Development Agenda which has been receiving attention since 2003.[101] Through its Standing Committee on Patents, in 2009 WIPO considered environmental matters, although given lack of agreement as to future focus of the committee, this were not discussed at the next

[97] <http://www.wto.org/english/news_e/pres02_e/pr310_e.htm>.
[98] Final report Commission on Intellectual Property Rights, Innovation and Public Health (2006) <www.who.int/intellectualproperty/report/en/>.
[99] IGWG Draft global strategy on public health, innovation and intellectual property 3 May 2008 <www.who.int/phi/documents/IGWG_Outcome_document03Maypm.pdf>.
[100] See quote in IP Watch 29 May 2008 'WHO Adopts 'Most Important Document Since Doha' On IP And Public Health' <www.ip-watch.org/weblog/index.php?p=1067>.
[101] Geneva Declaration on the Future of the World Intellectual Property Organization <www.cptech.org/ip/wipo/futureofwipodeclaration.html> and 'The 45 Adopted Recommendations under the WIPO Development Agenda' <www.wipo.int/ip-development/en/agenda/recommendations.html> and see generally <www.wipo.int/ip-development/en/agenda/>. See also Deere-Birkbeck, C. and Marchant, R. 'The Technical Assistance Principles of the WIPO Development Agenda and their Practical Implementation' ICTSD Issue Paper No. 28 March 2010 <ictsd.org/downloads/2010/04/deere_marchant_new2.pdf>.

meeting.[102] At a meeting in July 2009 of the WIPO Development Agenda in relation to IP and Public Policy, however, the WTO Director General said that

> the international intellectual property system cannot operate in isolation from broader public policy questions such as how to meet human needs as basic health, food and a clean environment.[103]

An Expert Meeting of the WIPO Development Agenda in November 2009 also called for activity relating to climate change.[104] Yet as with the UNFCC, a declaration requiring the sharing of climate change technologies would again have no power in itself, as WIPO has no enforcement procedures.

The final potential home for a declaration may be the most effective– the WTO. Returning to the start of this paper, it could be argued that compulsory licensing in the manner proposed is consistent with article 31 TRIPS, with addressing climate change being a national emergency. Confirmation of this could be provided in the manner of the Doha Declaration.

This discussion suggests that declarations could be made in more than one forum and that there are positive arguments to be made in relation to each. This is consistent with the argument made by leading work, that the issue should be approached by more than one institution.[105] But if a declaration is (or are) obtained, what effect might it (or they) have?

6.2 The point of a declaration—a nuanced approach

The challenges to the South African legislation and those made several years later regarding the prospects of compulsory licensing at Copenhagen, confirm that strong support for IP remains at international level. At the time of writing in June 2010, there are also the currently secret (although this is becoming less so) negotiations of the so-called 'Anti-Counterfeiting Trade Agreement'. The drafts and purpose of this agreement are very unclear, and there is a

[102] See report of 13th Meeting at <www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_7.pdf> and 14th meeting at <www.wipo.int/edocs/mdocs/scp/en/scp_14/scp_14_9_rev.pdf> and report from Knowledge Ecology International <keionline.org/node/776>.
[103] <www.wto.org/english/news_e/sppl_e/sppl131_e.htm>.
[104] Conference on IP and public policy issues July 2009 SCP 14/8 and WIPO Development Agenda meeting November 2009 <www.wipo.int/edocs/mdocs/mdocs/en/cdip_4/cdip_4_7.pdf>, esp p3
[105] Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

strong view that its purpose to increase the position of IP owners.[106] The potential impact of this on climate change has also been recognised by activists.[107]

Further support from this can be seen from the United States, home of many large IP owners, entering into a series of trade agreements which have been termed 'TRIPS PLUS'. These require other states to introduce particular forms of protection of IP, which may be higher than that which is required by TRIPS—for example, agreements have included provisions that states are not to have compulsory licensing at all.[108] Another opportunity for limitation by the United States is Special 301 Trade Act 1974. By this, if the United States considers that another state's IP law, while consistent with TRIPS,[109] is inconsistent with the view of the United States in relation to IP, the United States may complain and ultimately impose trade sanctions.

A declaration may seem unlikely, therefore, or even if it is made, its impact may be circumvented. The challenges to IP, for example at Doha and the WHO, have continued to be made in parallel with this more protective stance to IP, however, as part of an intricate web. For example, in 2001, the UN Sub-Commission for the Promotion and Protection of Human Rights called for the UN to open a dialogue with the WTO and a submission was made by the High Commissioner to the WTO for discussions in 2003.[110] At WIPO, work on the

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[106] The Parties involved in negotiating the terms of ACTA include: Australia, Canada, the European Union and its 27 Member States, Japan, Mexico, Morocco, New Zealand, Singapore, the Republic of Korea, Switzerland and the United States. See 'Obama Administration Denies Request to Release ACTA Docs', Bridges Weekly Trade News Digest, Vol. 13, Num. 10, 18th March 2009, <ictsd.net/i/news/bridgesweekly/43452/> and regarding non-disclosure, see material at <www.keionline.org/node/666>, <www.keionline.org/node/682> and <www.keionline.org/acta-petition>. For a comparison of leaked versions as at May 2010, see <euwiki.org/ACTA/diffs>.

[107] See Free Foundation for a Free Information Infrastructure 1 June 2010 'Anti-Counterfeiting Agreement: deliberate confusion' <action.ffii.org/acta/Analysis>.

[108] Agreement between the United States of America and the Hashemite Kingdom of Jordan on the Establishment of a Free Trade Area <www.ustr.gov/assets/Trade_Agreements/Bilateral/Jordan/asset_upload_file250_5112.pdf>, article 4. See also discussion of the Dominican Republic Central American Free Trade Agreement by the author, Guadamuz, A. and Hatcher, J. 'The impact of Free Trade Agreements on Information Technology based business' (2007) <www.law.ed.ac.uk/ahrc/files/95_scopingreportjune2007.pdf>

[109] Section 301 Trade Act 1974 and Section 1303 Omnibus Trade and Competitiveness Act 1988, Ghosh, S. Comment II 'Competitive Baselines for Intellectual Property Systems' 793 in Maskus, K.E. and Reichman, J.H. (eds) (2005) *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime* Cambridge University Press, Cambridge, UK. A set of yearly reports can be found on the Knowledge Ecology International website at <keionline.org/ustr/special301>.

[110] Office of the High Commissioner for Human Rights 'Human Rights and Trade' for Cancún, Mexico, 10-14 September 2003 <www.unhchr.ch/html/hchr/cancunfinal.doc>.

development agenda, discussed above, continues.[111] Civil society activists have proposed an Access to Knowledge Treaty and for a Medical Research and Development Treaty.[112] In relation to climate change, a tripartite project was launched in April 2009 by the European Patent Office, the International Centre for Trade and Sustainable Development and the UN Environmental Programme which reviewed patents, clean technologies and licensing. The results were presented at the Copenhagen meeting in December 2009[113] and the final report will be presented at an ICTSD event at the Bonn meeting of parties in June 2010.[114]

These initiatives suggest movements to challenge the power of IP, but might seem to give rise to powerless outputs. Scholars have argued, however, the proposals and draft new treaties can all combine to have a substantive, although less direct, effect in determining the conduct of states and IP owners, and leading to a more open and less controlled approach to technology which is the subject of IP.[115] For present purposes, this might led firstly, to declarations being made and secondly to states being less inclined to pursue means of limiting their effect, such as through trade agreements.

6.3 *The point of a declaration—a stick*

If a declaration is made, then it can have an impact on any challenges which might be made at the WTO to national legislation, for example that which is proposed in the example. The WTO dispute settlement body has not been called upon to determine the legal force of the Doha Declaration, but the potential impact of it has been considered in some depth by commentators.'

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[111] For deep discussion about the possible impact of WIPO, see Dinwoodie, G. and Dreyfuss, R. C. 'Designing a Global Intellectual Property System Responsive to Change: The WTO, WIPO and Beyond' (2009) 46 Houston Law Review 1187-1234, available at <papers.ssrn.com/sol3/papers.cfm?abstract_id=1502262>

[112] See, respectively, Access to Knowledge page <www.cptech.org/a2k/> and draft Treaty at <www.cptech.org/a2k/a2k_treaty_may9.pdf> and Medical Research and Development Treaty <www.cptech.org/workingdrafts/rndtreaty.html> and draft treaty <www.cptech.org/workingdrafts/rndtreaty.html>.

[113] See details of project at <ictsd.org/i/research/51361/>, <www.epo.org/topics/news/2009/20090427.html> and <www.unep.ch/etb/initiatives/pdf/ESTsProject%20Description1.pdf> and of presentation at <www.ictsdclimate.org/events/unfccc-side-event-on-patents-and-clean-energy>.

[114] <ictsd.org/i/events/dialogues/77464/>.

[115] See eg Drahos, P [2003] 'The Global Intellectual Property Ratchet: Why it Fails as Policy and What Should be Done About It' Paper for the Open Society Institute <cgkd.anu.edu.au/menus/PDFs/IPRatchet_Drahos.pdf> and Helfer, L.R. 'Mediating Interactions in an Expanding International Intellectual Property Regime' 180 in Cottier, T., Pauwelyn, J. and Burgi Bonamoi, E. (eds) (2005) *Human Rights and International Trade* Oxford University Press, Oxford, UK cf lack of force, discussed in Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

In interpreting articles 30 and 31 TRIPS, when interpreting whether or not a state has met its obligations in relation to the protection to be afforded to patents, the WTO dispute settlement bodies cannot add to or diminish the obligations in TRIPS.[116] It is also clear that a declaration is not the same as an amendment of the treaty. It has been argued, however, that the declaration is an agreement in relation to TRIPS to which regard should be had on the basis of the rules of interpretation in article 31(2)(a) of the Vienna Convention on the Law of Treaties.[117] This would support a wider approach to TRIPS. Further, article 31(1) Vienna Convention providing that treaties should be read in the light of its object and purpose,[118] which would seem to provide a greater role for articles 7 and 8 TRIPS, notwithstanding the decision in Canada discussed above. A climate change declaration in the WTO could lead, therefore, to an approach to TRIPS which accords more importance to rights other than those of the patent owner.

Finally, article 31 (3)(c) Vienna Convention provides that any relevant rules of international law which are applicable in the relations between the parties should be taken into account when interpreting a treaty. This has led to arguments that other fields of law, not just trade and IP, could be taken into account when interpreting TRIPS, which could provide a role for a declaration made outside the WTO, say in the UNFCC, WIPO or by a human rights body. There is also an important body of work arguing that human rights should be considered by WTO dispute settlement bodies when considering whether or not states have acted consistently with their WTO obligations.[119] There are diverging views, however, as to whether 'parties' requires that all countries party to each treaty must be identical (which

[116] Article 3.2 DSU.
[117] Charnovitz, S. 'The legal status of the Doha Declarations.' J.I.E.L. 2002, 5(1), 207-211; Gathii, J.T. 'The Doha Declaration on Trips and Public Health Under the Vienna Convention of the Law of Treaties' Harvard Journal of Law and Technology, Vol. 15, No. 2, 2002, 292; Shanker, D. 'The Vienna Convention on the Law of Treaties, the Dispute Settlement System of the WTO and the Doha Declaration on the TRIPS Agreement' J.W.T. 2002 36(4) 721-772; Hestermeyer, H. (2007) *Human Rights and the WTO. The Case of Patents and Access to Medicines* Oxford University Press, New York, USA 122 et seq and 129.
[118] And also in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context.
[119] Marceau, G. 'WTO dispute settlement and human rights.' E.J.I.L. 2002, 13(4), 753-814; Dommen, C. 'Raising Human Rights Concerns in the World Trade Organization: Actors, Processes and Possible Strategies' Human Rights Quarterly 24.1 (2002) 1-50; Petersmann, E-U. 'Human Rights and International Trade: Defining and connecting the Two Fields' 29 and Ranjan, S. 'International Trade and Human Rights: Conflicting Obligations' 311 both in Cottier, T., Pauwelyn, J. and Burgi Bonamoi, E. (eds) (2005) *Human Rights and International Trade* Oxford University Press, Oxford, UK; and Frankel, S. 'WTO Application of 'the Customary Rules of Interpretation of Public International Law' to Intellectual Property' 46 Va. J. Intl L. 365 2005-6.

would not be the case here, as it has been noted that the parties to the WTO, human rights treaties and the UNFCC are not the same),[120] or whether only those countries involved in a particular dispute must be parties to all treaties.[121] WTO dispute settlement bodies[122] have looked to international environmental instruments, including those of a non-binding nature and those to which all members of the WTO are not parties. This approach has attracted much criticism, however,[123] and this approach is not always taken.[124]

The potential for the WTO dispute settlement bodies to look to human rights and environmental instruments does suggest that use could be made of these instruments discussed at the start of the paper when interpreting article 30 and 31 TRIPS, without the need for a declaration. The lack of reference to IP in the UNFCC, however, the decision in Canada and the arguments which can be made in favour of IP in relation to human rights suggest that it would be unwise for a state to rely on this approach when adopting creative legislation. If a declaration is made in the WTO, UNFCC, WIPO or human rights fields, this discussion does suggest that the WTO decision maker might have regard to it when interpreting TRIPS, which could encourage a creative legislator. If, however, states resist the making of a declaration, or if a WTO panel takes a narrow approach to the interpretation of TRIPS, then if a state passes creative legislation, it is highly likely that the interests of the patent owner will prevail at the WTO, over arguments based on climate change.

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[120] See Hestermeyer, H. (2007) *Human Rights and the WTO. The Case of Patents and Access to Medicines* Oxford University Press, New York, USA Annex B for lists of memberships. See also en 4, 37, 81.

[121] See McLachlan, C. 'The principle of systemic integration and Article 31(3)(c) of the Vienna Convention' I.C.L.Q. 2005, 54(2), 279-319 and French, D. 'Treaty interpretation and the incorporation of extraneous legal rules' I.C.L.Q. 2006, 55(2), 281-314

[122] *United States — Import Prohibition of Certain Shrimp and Shrimp Products* DS 58 <www.wto.org/english/tratop_e/dispu_e/cases_e/ds58_e.htm>.

[123] For discussion see eg Howse, R. 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' , available at <http://www.worldtradelaw.net/articles/howseshrimp.pdf> published at 2002 27 Colum. J. Envtl. L. 491; Howse, R. 'The Most Dangerous Branch? WTO Appellate Body Jurisprudence on the Nature and Limits of the Judicial Power' 11 in Cottier, T and Mavroidis, P.C.(eds) (2003) *The Role of the Judge in International Trade Regulation. Experience and Lessons for the WTO* University of Michigan Press, Ann Arbor, USA, Weiss, F. 'The limits of the WTO: facing non-trade issues' 155 and Francioni, F. 'WTO Law in context: the integration of International norms on human rights and environmental protection in the dispute settlement process.' 143 in Sacerdoti, G. et al (eds) (2006) *The WTO at Ten: the Contribution of the Dispute Settlement System* Cambridge University Press, Cambridge, UK and Anderson, R. and Wager, H. Human Rights, Development, and the WTO: The Cases of Intellectual Property and Competition Policy JIEL 2006 9 (707)

[124] cf *EC—Measures Affecting the Approval and Marketing of Biotech Products* DS291 <www.wto.org/english/tratop_e/dispu_e/cases_e/ds291_e.htm>. See discussion in Henckels, C. 'GMOS in the WTO: a Critique of the Panel's Legal Reasoning in EC—BIOTECH—[2006] MelbJIL 12; (2006) 7(2) Melbourne Journal of International Law 278, Section IV, A, D and E; Hestermeyer, H. (2007) *Human Rights and the WTO. The Case of Patents and Access to Medicines* Oxford University Press, New York, USA 169-90; and Young, M.A. 'The WTO's use of relevant rules of international law: an analysis of the *Biotech* case.' I.C.L.Q. 2007, 56(4), 907-930.

This paper comes, therefore, full circle. Human rights and concern at the impact of IP may not suffice to address the conflict discussed here between IP and climate change, although there is scope for them to do so. A second contribution is required. This may come from a review of the more practical and scientific aspects of responding to climate change, and from competition law. The following discussion of this will also give rise to some issues about the possible content of a declaration.

7. An even bigger box

7.1 Is a declaration required: a question of substance

This paper has proceeded so far on the basis that there are technologies which, continuing the example, the relevant government department could designate as essential for the path the state has chosen to meet obligations under the Kyoto Protocol. This stance is consistent with the acceptance seen in the literature and policy work that IP can cause concerns in relation to climate change. But how real is the problem? Could one technology be essential to respond to climate change? Are the right questions being posed in relation to the impact of IP on climate change?

This paper and project will not address the validity of sceptical approaches to climate change and the human contribution to it, and therefore suggest that responding to climate change is not essential. The present issue is that rather there are problems which relate to climate change—howsoever they have come about, just as in relation to access to essential medicines, the question is how to treat AIDS or malaria sufferers, rather than explore how persons came to have the illness. The question to be pursued rather is whether any particular technology can be essential, in the manner of a patented drug being an essential means of treating a disease.[125]

Key issues will be whether or not is there another form of using, say, wave power in a particular situation rather than the patented technology (say, the Pelamis Wave Energy

[125] Eg efavirenz for HIV/AIDS <ictsd.org/i/news/bridgesweekly/6490/>.

Converter,[126] or the Oyster).[127] Also, what is the scope of the patented technology—does it relate to a product as a whole, a small part of it, or an improvement of a small part of it?[128] There has recently been an important call for deeper analysis of these questions, and the impact of ownership of IP in relation to these different forms of innovation on technology transfer and addressing climate change.[129] There are also wider questions—can other new technologies be used, such as those involving solar[130] or wind power;[131] are there more short term solutions such as carbon capture storage which could address the same problem, as being pursued in the UK through the prize; or should there be more insulation and less use of cars and air travel?

The range of potentially useful technologies and practices to respond to climate change, and the narrow scope of some patents, does not remove the prospects of a landmark technology being developed and patented, which would in itself have a significant impact on climate change—a silver bullet, more akin to developments seen in the medical field. For this reason, a declaration should still be sought in a form mirroring that proposed in the national example with a focus on essential technologies. It should be sought at the WTO, UNFCC, WIPO and human rights bodies to obtain maximum impact from a practical and enforcement perspective.

Greater impact would be obtained from any declaration, but in particular one within the WTO, if it was mandatory—if it required that states introduce legislation which requires IP owners to share the technologies. A declaration which merely permitted states to do this, rather than in the more flexible manner of the provisions of TRIPS which have been discussed in this paper, might be more readily obtained. Nonetheless, for its practical impact to be assured, mandatory declarations would be of much greater effect.[132] Efforts should also

[126] <www.pelamiswave.com/>.
[127] <www.aquamarinepower.com/technologies/>.
[128] See discussion earlier in this paper in relation to the construction of patents, and also Barton, J. (2007) 'Intellectual Property and Access to Clean Energy Technologies in Developing Countries. An Analysis of Solar Photovoltaic, Biofuel and Wind Technologies' <ictsd.org/i/publications/3354/>.
[129] Maskus, K.E. 'Intellectual Property and the Transfer of Green Technologies: An Essay on Economic Perspectives' [2009] W.I.P.O.J. No. 1.
[130] Eg offerings of Kingspan <www.kingspan.com/kingspangroup/media/news_features/nf2010/2010-05-19/>.
[131] <www.bwea.com/>.
[132] Discussion of the relationship between different mandatory international obligations, such as this proposal and a ban on compulsory licensing in a TRIPS PLUS agreement is outside the scope of this paper. See Pauwelyn, J. (2003) *Conflict of Norms in Public International Law* Cambridge University Press, Cambridge, UK and Bartels, L. and Ortino, F. (eds) (2006) *Regional Trade Agreements and the WTO Legal System* Oxford University Press, Oxford, UK.

be pursued in this respect now, rather than waiting for the problem to arise. This proposal will be discussed in the project.

What IP rights should be the subject of the declaration? This paper has focussed so far on patents, which have the greatest form of power in terms of controlling the independent conduct of others. Regard should, however, also be had to copyright and database rights. These rights control the reproduction of data—in itself and in relation to use of a particular set. This will not cover independent development of the same data, and might therefore seem of less concern for climate change. Consider, however, key sets of geospatial data, which relate to changes in climate, effectiveness of forms of response and changes in boundaries, all being controlled by the same IP owner. In the past, issues have arisen regarding the power of the Automobile Association[133] and could arise regarding Google mapping or similar products, if the owner of the IP declined to share this data at all, or do so only for a large fee.[134] There may be many forms of responding to climate change—but without the means of assessing its scale, these may be of little effect. The power of the copyright owner has also been identified in relation to the software which is used to operate technologies as being important.[135] Patents, copyright and database rights will therefore also form part of the project.

This questioning of whether IP can relate to essential material has not only a negative, but also a positive function. As well as testing whether or not IP does have a significant effect on climate change, it also introduces another means of response. If the level of power of the IP owner is a concern, competition may also be relevant.

7.2 Another existing interventionist tool

[133] *HM Stationery Office v Automobile Association Ltd* [2001] E.C.C. 34; Waelde, C. 'Databases and lawful users: the chink in the armour' I.P.Q. 2006, 3, 256-282; Saxby, S. 'Public policy and the digital geospatial representation of designated land use in the UK: Part 1' and 'Public policy and the digital geospatial representation of designated land use in the UK: Part 2' J. Env. L. 2007, 19(1), 5-28 and J. Env. L. 2007, 19(2), 227-246

[134] For discussion, see Peritz, R.J.R. and Miller, M. 'An Introduction to Competition Concerns in the Google Books Settlement' <papers.ssrn.com/sol3/papers.cfm?abstract_id=1564363>; and Manne, G. A. and Wright, J.D. 'Innovation and the limits of antitrust' J.C.L. & E. 2010, 6(1), 153-202.

[135] Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>, p8

Competition law has received significant attention in relation to the sharing of technology, although not from the combined perspective to be explored in this project.[136] Competition has featured in the health, and also communications fields, in relation to the power of IP. IP owners have been required to share interoperability information where this has become an industry standard[137] (which may become more of an issue in time in relation to climate change and information)[138] and regulators have sought to intervene when the ownership of IP has not been disclosed in formal standard setting discussions[139] or in obtaining a patent.[140]

Competition law can only apply on the basis of the national or regional competition law. For the purpose of this paper, the key principle is that refusal to licence or obtaining the IP right might be an abuse of a dominant position or a breach of a competition provision of similar nature.[141] Scholars have identified that patents in relation to climate change technologies are owned by a fairly small amount of private entities, although this does vary with the industry and the country.[142] This does not mean that these patent owners are necessarily in a dominant

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[136] See preliminary exploration of this by the author in conference paper 'The place of intellectual property in a world of environmental change' presented at *BILETA*, Vienna, 2010 <www.law.ed.ac.uk/file_download/publications/1_586_theplaceofintellectualpropertyinaworldof.pdf>. Note also that Article 31(k) TRIPS addresses compulsory licensing as a response to anti-competitive conduct, and also article 8 and 40 also address this, although they do not impose mandatory obligations. See, for example Littleton, M. (2008) 'The TRIPS Agreement and Transfer of Climate-Change-Related Technologies to Developing Countries' DESA Working Paper No. 71 <www.un.org/esa/desa/papers/2008/wp71_2008.pdf>, Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>, p24-35 and Abbott. F.M. (2009) 'Innovation and Technology Transfer to Address Climate Change Lessons from the Global Debate on Intellectual Property and Public Health' <ictsd.org/i/publications/50454/>.

[137] *IMS Health GmbH & Co OHG v NDC Health GmbH & Co KG* (C418/01) [2004] E.C.R. I-5039 and *Microsoft Corp v Commission of the European Communities* (T-201/04) [2007] 5 C.M.L.R. 11 cf in the US, *Verizon Communications, Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398

[138] See discussion in Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742>, p28 and the activities of the International Telecommunications Union in relation to climate change and standards <www.itu.int/themes/climate/engagement/clean-technology.html>.

[139] Case number COMP /38.636. See EC Commission Press release <europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/330&form> and Treacy, P. and Lawrance, S. 'Patent Misuse and Patent Ambush: The Competition Authorities get to Grips with IP' , [2006] 5 Euro. C.L. xi-xvi. *Also available at* <www.bristows.com/?pid=46&level=2&nid=861> cf in US, In the Matter of Rambus, Inc.Docket No. 9302 <www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf> and *Rambus Inc v Federal Trade Commission* 522 F.3d 456.

[140] *Commission Decision of 15 June 2005 relating to a proceeding under Article 82 of the EC Treaty and Article 54 of the EEA Agreement*
(Case COMP/A. 37.507/F3 . AstraZeneca
<ec.europa.eu/comm/competition/antitrust/cases/decisions/37507/en.pdf>.

[141] Eg article 102 Treaty on Functioning European Union and Section 8 Competition Act 1998 (South Africa) cf in the US Section 2 Sherman Act prohibits possessing and wilfully having acquired or maintained a monopoly with a negative effect on competition and in Australia section 46 Trade Practices Act 1974 (Cth) prohibits the misuse of market power.

[142] Barton, J. (2007) 'Intellectual Property and Access to Clean Energy Technologies in Developing Countries. An Analysis of Solar Photovoltaic, Biofuel and Wind Technologies' <ictsd.org/i/publications/3354/> and

position[143] in a market, as properly defined,[144] such that abuse becomes relevant. The market is not necessarily the same as the patented technology.[145] Questions of substitutability, and the relevance of, say, other forms of wave technology, other renewable technologies, carbon capture storage, insulation and changes in societal practice may also be relevant.

The extent to which IP owners are in a dominant position in a market, and when it should be abuse to refuse to licence, will therefore also be explored in the project.

8. The Future

Going forward, the aim of this project is to explore the extent to which IP can impose obstacles on responding to climate change, and the most effective means of addressing this within the legal framework, while recognising and respecting the positive contribution which can be made by IP. Preliminary work suggests that there is potential for problems to arise in technologies which are patented but also in relation to copyright and database rights in particular respect of underlying data. Solutions can be pursued at the international level, through declarations and WTO dispute resolution (using IP, climate change and human rights instruments) and through policy developments, as part of a wider sceptical approach to IP. There will also be a role for competition law. The key contribution of the project will be to develop the question of access to climate change technologies, by exploring the interface between all these fields. Regard will also be had to corporate social responsibility,[146] world trade law other than TRIPS,[147] regulation, sustainable development[148] and funder and

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Srinivas, K.R. 'Climate Change, Technology Transfer and Intellectual Property Rights' RIS-EP #153 April 2009 <papers.ssrn.com/sol3/papers.cfm?abstract_id=1440742> (see pp2-6, 18).

[143] In the EU, see *United Brands Co v Commission of the European Communities* (27/76) 1978] E.C.R. 207, para 65. For discussion regarding innovative markets, see Utton, M.A. (2003) *Market Dominance and Antitrust Policy Second Edition* Edward Elgar, Cheltenham, UK and Northampton, MA, USA, in particular chapter 1, chapter 4 71 et seq, chapter 6, 144 et seq and chapter 11, 280 et seq and Monti, G. 'Article 82 and New Economy Markets' in Graham, C. and Smith, F,. (eds) (2004) *Competition, Regulation and the New Economy* Hart, Oxford, UK.

[144] For EU guidance, see Commission Notice on the definition of the relevant market for the purposes of Community competition law O.J. C 372/03 9.12.1997.

[145] See eg Anderman, S.D. and Schmidt, H. 'EC Competition Law and IPRs' 37 in Anderman, S.D. (ed) (2007) *The Interface between Intellectual Property Rights and Competition Policy* Cambridge University Press, Cambridge, UK.

[146] See eg Richardson, B.J. 'Climate finance and its governance: moving to a low carbon economy through socially responsible financing' 2009 ICLQ 597.

[147] See eg Cossy, M. And Marceau, G. 'Institutional challenges to enhance policy co-ordination—how WTO rules could be utilised to meet climate change objectives' in Cottier, T et al (eds) (2009) *International Trade Regulation and the Mitigation of Climate Change. World Trade Forum* Cambridge University Press, Cambridge, UK.

industry perspectives, to consider the wider question of access to and development of technologies. The project aims to take a holistic approach to identifying the real challenges and developing workable solutions.

[148] Work has been ongoing in this area for some time, see United Nations Commission on Sustainable Development Background Paper No. 22 April-May 1998, 'The Role of Publicly Funded Research and Publicly Owned Technologies in the Transfer and Diffusion of Environmentally Sound Technologies' which refers also to the Convention on Biodiversity: <www.un.org/documents/.../background/ecn171998-bp22.htm>.